



BSI Standards Publication

Cycles - Lighting and retro-reflective devices

Part 2: Retro-reflective devices

National foreword

This British Standard is the UK implementation of ISO 6742-2:2015+A1:2018.

The UK participation in its preparation was entrusted to Technical Committee GME/25, Cycles.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Cycles — Lighting and retro-reflective devices —

Part 2: Retro-reflective devices

AMENDMENT 1

Cycles — Dispositifs d'éclairage et dispositifs rétro réfléchissants —

Partie 2: Dispositifs rétro réfléchissants

AMENDEMENT 1





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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 149, *Cycles*, Subcommittee SC 1, *Cycles and major sub-assemblies*.

A list of all parts in the ISO 6742 series can be found on the ISO website.

Cycles - Lighting and retro-reflective devices —

Part 2: Retro-reflective devices

1 Scope

This part of ISO 6742 is applicable to retro-reflective devices used on cycles intended to be used on public roads and, especially, bicycles complying with ISO 4210 and ISO 8098.

This part of ISO 6742 specifies photometric and physical requirements of retro-reflective devices.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

CIE 15, *Colorimetry: official recommendations of the International Commission on Illumination*

CIE 1931, *XYZ colour space of the International Commission on Illumination*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

retro-reflective device; reflector

assembly ready for use and comprising one or more retro-reflecting optical units

3.2

wide angle reflector

device providing retro-reflection through horizontal entrance angles of not less than 50° on either side of the reference axis

3.3

conventional reflector

device providing retro-reflection through entrance angles of not less than 20° on either side of the reference axis

3.4

high values reflector

red retro-reflective device with high values of reflection e.g. dedicated to be mounted on luggage carrier

3.5

retro-reflective spoke

spoke with retro-reflective surface

3.6

retro-reflective spoke case

device, e.g. cylinder, with retro-reflective surface with or without a gap, providing a secured mounting on a spoke

3.7 retro-reflective tyre
tyre ready for use and comprising retro-reflecting annuli moulded on to each sidewall of the tyre

4 General

4.1 Symbols and units used

Symbols are shown in [Figure 1](#). Their meaning and units used are given in [Table 1](#).

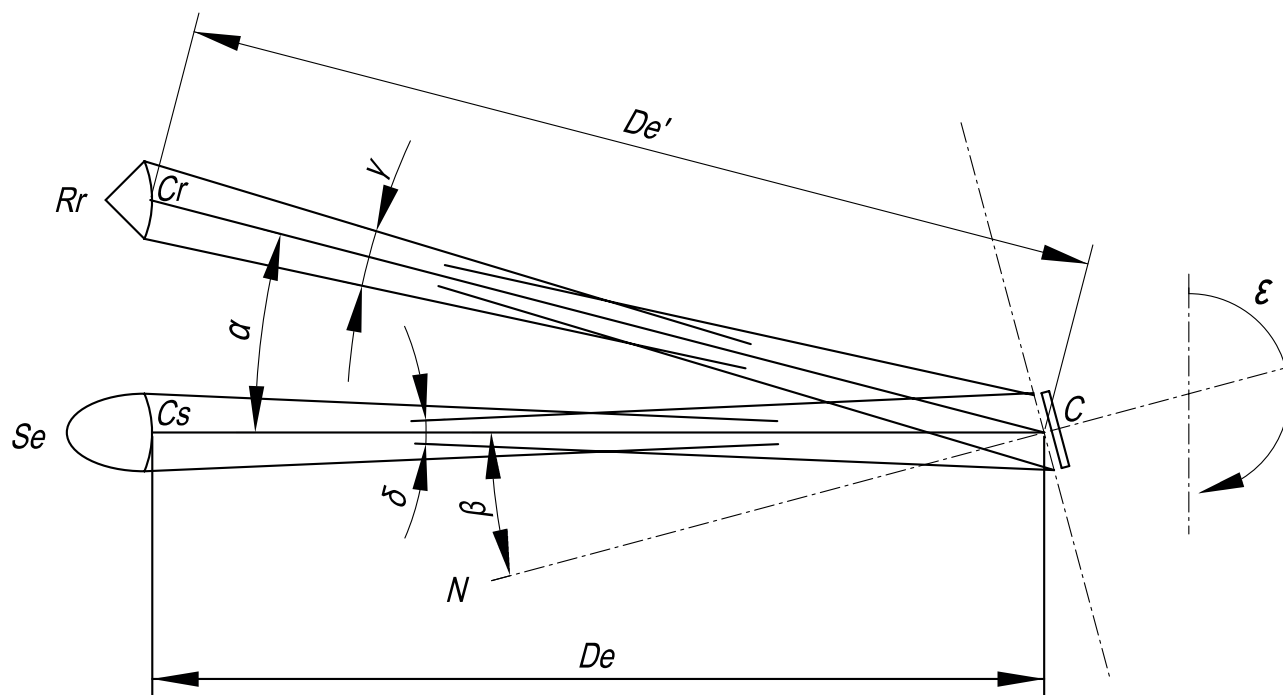


Figure 1 — Symbols

NOTE The following symbols are in accordance with Regulation No.3 of the UN/ECE concerning retro-reflective devices.

Table 1 — Meaning and units of symbols used

Symbol	Meaning	Unit
A	Area of the effective reflex surface of the retro-reflective device	cm^2
C	Reference centre	—
NC	Reference axis	—
R_r	Receiver, observer or measuring device	—
C_R	Centre of receiver	—
$\varnothing_R$	Diameter of receiver R_r , if circular	cm
S_e	Source of illumination	—
C_S	Centre of source of illumination	—
$\varnothing_S$	Diameter of source of illumination	cm
D_e^a	Distance from centre C_S to centre C	m

^a D_e and D'_e are generally very nearly the same and under normal conditions of observation it may be assumed that $D_e = D'_e$. Furthermore, the effective distances may be used when a collimated system is used in order to obtain an artificially increased measuring distance.